

Sandra O’Niel’s Testimony on HB5341

Committee on Regulatory Reform

Wednesday, November 7, 2007

307 House Office Building

Good Morning Madam Chairwoman and members of the committee. Thank you for allowing me to speak before you today. I have anticipated this day for nearly two years. My name is Sandra O’Niel from Traverse City. I am here on behalf of everyone in Michigan; I want to make a difference in the lives of our citizens and I want to spare them the agony of loss and despair caused by the devastating effects of carbon monoxide poisoning.

After celebrating a glorious independence holiday in 2005 with family, my parents went to bed. While they slept, carbon monoxide poisoning left my mother lifeless. It left my father in a coma for 5 days and although he received 17 hyperbaric treatments, he still sustained some brain damage. My father also suffers from a broken heart. My dad lost the love of his life.

A silent killer changed our world. My mother Natalie was an incredible woman. She touched the lives of everyone around her. She truly made an impact in the world. My mother was loved and cherished by so many friends, family and neighbors. Life was snuffed out by an odorless, colorless, gas, taking everything away from her and altering our entire family forever.

My mother gave unselfishly. She was a woman of great wisdom, who was passionate about life, devoted to her family, who always had time for kind words, was known for her good deeds and generosity, her laughter, her hugs, her deep love and affection for so many. Life with my mother and for my mother was truly a gift.

The last time I spoke to my mother was July 3, 2005. She told me how much she loved me. My mother phoned everyday-I will never hear my mother's voice again. When I need advice or crave support or need to tell my mom how I'm feeling- carbon monoxide poisoning destroyed the opportunities.

Carbon Monoxide legislation is not about politics. It's about doing what is right for the people of Michigan. It should not be a Republican or Democratic issue; it is a life and death issue. We can do great things for the people of Michigan together. Carbon monoxide is the leading cause of accidental poisoning deaths in America. We need to be proactive; Carbon monoxide alarms save lives; senseless deaths and injuries can be prevented. The unintended consequences from not requiring carbon monoxide alarms are a frightening and needless prospect.

My mother taught me to be strong, keep pressing forward and stand up for what I believe in: **I believe in this legislation.** I have worked with people in other states who have passed Carbon Monoxide legislation and I have spoken to victim's families. Thirteen states have carbon monoxide legislation. The City of Pontiac has a carbon monoxide

ordinance and many local Michigan municipalities refer to the dangers of carbon monoxide in their web sites. I continue to receive letters and emails from people in states where there is no legislation pending and they are seeking a way to start the process. People realize that carbon monoxide safety is critical.

Carbon monoxide alarms are reliable and need to be part of new residential construction requirements just as smoke detectors are required now in homes. No one should die needlessly from fire or carbon monoxide poisoning when preventive measures are at hand. The cost of the unit is a small price when lives are at risk. Carbon monoxide alarms can enhance life safety.

88 people died in Michigan in 2006 from carbon monoxide poisoning. These are all personal tragedies. Don't wait until it's too late to impact someone's life.

May 15, 2006

Submission to: Michigan Department of Labor & Growth, Bureau of Construction Codes
and Fire Safety
P.O. 30254
Lansing, Michigan 48909
Attn: Dianne Barnes
Fax# 517-241-9570

From: Sandra L. O'Niel
2900 Holiday Pines Rd.
Traverse City, Michigan 49686
Email
Work 231-932-2829
Cell 269-876-1194
Home 231-938-4438

Submission for proposed change to the existing 2003 Michigan Residential Code

The proposed change is within Michigan Residential Code 2003. The purpose of this code change is to introduce a new requirement mandating the installation of carbon monoxide alarms. The addition would logically be inserted as part of section Section R313 on page 53-54, which requires smoke alarms in residential dwellings. The proposed addition will require carbon monoxide alarms to be installed in new residential dwellings and when alterations, or additions requiring a permit occurs to an existing home; the language would read as follows:

SECTION R313
SMOKE ALARMS AND CARBON MONOXIDE ALARMS

R313.1 Smoke detection and notification All smoke alarms shall be listed in accordance with UL217 and installed in accordance with the provisions of this code and the household fire warning equipment provisions of NFPA72.

Household fire alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detector and audible notification device installed as required by this section for smoke alarms, shall be permitted. The household fire alarm system shall provide the same level of smoke detection and alarm as required by this section for smoke alarms in the event the fire alarm panel is removed or the system is not connected to a central station.

. Add R313.1A Carbon monoxide detection. All carbon Monoxide alarms shall be listed and labeled as complying with UL2034-2002 or CSA6.19-01 and shall be installed in accordance with the manufacturers installation instructions, testing and maintenance.

R313.2 Location.. Smoke Alarms shall be installed in the following locations:

1. In each sleeping room.
2. Smoke alarms and **carbon monoxide alarms** shall be installed outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. smoke alarms and **carbon monoxide alarms** shall be installed on each additional story of the dwelling, including basements, but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm and **carbon monoxide alarm** on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

R313.2.1 Alterations, repairs and additions. When alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms and **carbon monoxide alarms** as required for new dwellings; the smoke alarms and **carbon monoxide alarms** shall be interconnected and hardwired.

Exceptions:

1. Inter connection and hard-wiring or smoke alarms and **carbon monoxide alarms** shall not be required where the alterations or repairs Do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for hard wiring and interconnection without the removal of interior finished.
2. Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, are exempt from the requirements of this section.

R313.3 Power source. In new construction, the required smoke alarms and **carbon monoxide alarms** shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Smoke alarms and **carbon monoxide alarms** shall be permitted to be battery operated when installed in buildings without commercial power or in buildings that undergo alterations, repairs or additions regulated by Section R313.2.1.

Supporting Statement

The proposed incorporation into the state code would provide for carbon monoxide alarms in new residential dwellings. Building codes are considered to be the minimum

accepted level of safety for any new residential building. The reason for change to the code is a concern for the protection of health and safety of the residents of Michigan. Carbon monoxide alarms save lives and reduce injuries. Carbon monoxide alarms belong in all new residential homes. Because carbon monoxide can be present in any home that has a fuel burning appliance, carbon monoxide alarms need to be present. ANY fuel burning appliance has the potential to produce dangerous levels of carbon monoxide gas: carbon monoxide is produced by the incomplete combustion of fossil fuels, wood and other sources. Homes with attached garages are at risk, especially when car engines are being warmed up. Moreover, most new homes are constructed tighter than in past years, often having fewer air exchanges. This results in trapping carbon monoxide in the home. Likewise, chimneys can be blocked, heat exchanges can malfunction. Additionally, during power outages, space heaters and generators are often used, presenting a danger. According to the American Lung Association, Americans spend 90% of time indoors. (2004). properly selecting, installing, inspecting and maintaining appliances can reduce the risk of exposure and dangerous levels of carbon monoxide. Carbon monoxide alarms are the only way to detect one's exposure to carbon monoxide. Carbon monoxide alarms monitor the air and sound a loud alarm before carbon monoxide levels become threatening.

The threat of carbon monoxide is real. Carbon monoxide reduces the blood's capability to carry oxygen. By replacing oxygen with carbon monoxide in our blood, our bodies poison themselves by cutting off the needed oxygen to our organs and cells, causing various amounts of damage depending on the exposure. Breathing low levels of carbon monoxide can cause fatigue and increase chest pain in people with chronic heart disease. Breathing higher levels of carbon monoxide causes flu like symptoms such as headaches, dizziness and weakness in healthy people. Carbon monoxide also causes sleepiness, nausea, vomiting, confusion and disorientation. At very high levels, it causes loss of consciousness and death.

Medical experts agree that it's difficult to estimate the total number of carbon monoxide incidents because the symptoms of carbon monoxide poisoning resemble so many other common ailments. The danger signals are often overlooked or not detected at all and the results are serious injury or death. Carbon monoxide is the number one cause of poisoning death in America, (according to the Journal of American Medical Association.) The statistics indicate approximately 1,500 people die annually due to carbon monoxide exposure. The American Association of Poison Control Centers reported 40,000 carbon monoxide exposures nationwide and 20,000 health-related injuries each year. Often carbon monoxide poisoning is misdiagnosed as the flu and goes unreported. Most hospitals don't include CO poisoning on their coding documents.

Because carbon monoxide is difficult to detect- colorless, odorless, tasteless- carbon monoxide can kill without knowing it is present. Therefore, it is known as "The Silent Killer." **88 Michigan deaths were attributable to carbon monoxide in 2004.** The only Safe way to detect carbon monoxide is with a carbon monoxide alarm. Analysis of carbon monoxide deaths compiled by the National Center for Health Statistics show the

highest death rate from carbon monoxide poisoning occur in winter and among males, blacks, the elderly, and residents in northern states. People with cardiac and respiratory conditions, infants, pregnant women, unborn babies, infants may be more quickly and severely affected by carbon monoxide poisoning.

While everyone knows that carbon monoxide can lead to death, what is not usually discussed are those serious health problems for those who survive severe carbon monoxide poisoning. According to the Illinois Poison Center, studies indicated that 25 to 40% of severely carbon monoxide poisoned individuals can develop neuropsychiatry disorders: memory loss, mood disorders, difficulty with problem solving, reading or math. A January 2006 article in the Journal of the American Medical Association showed that for individuals who had been involved in a carbon monoxide poisoning and survived, there was a three-fold increase in coronary artery disease seven years later compared to non poisoned patients. The Carbon Monoxide Health and Safety Association estimates that the medical costs of carbon monoxide poisoning to be \$5.4 billion. That does not take into account lost productivity and lost wages.

Dr. David Penney, Ph.D, is Professor of Physiology and Adjunct Professor of Occupational and Environmental Health, in the School of Medicine, Wayne State University. He is also Director of General Surgical Research at Providence Hospital. His dominant interest throughout his career has been in carbon monoxide, to which his more than 60 scientific papers on the topic attest. His work constitutes more published work on carbon monoxide by one person than any one else in the world. While he is very familiar with the effects of acute CO poisoning, he is also one of a few experts in the world on chronic, low –level carbon monoxide poisoning. This is often the most difficult to diagnose, treat and prove. Dr. Penney is a member of a select panel convened by the U.S. Environmental Protection Agency (EPA) in 1979 and again in 1989 to set standards for carbon monoxide in outside air in the U.S. In 1997, he was invited by the World Health Organization (WHO) to work with eleven other experts from around the world in Europe to develop CO standards for the entire world. **Dr. Penney states that the current CO alarm technology and prevailing standards will protect people from high-level acute poisoning harm and death.** Dr. Penney also states that it is now clear that chronic carbon monoxide poisoning frequently causes serious health harm and leaves a pentad of symptoms which he characterizes as “carbon monoxide syndrome.”

Technical questions have been raised about false alarm incidence and sensitivity of carbon monoxide alarms. As a result, Underwriters Laboratories revised UL 2034, effective for alarms manufactured after October 1, 1998. Specific modifications to the UL2034 standard that have been ratified include a test requirement to ensure operation at 10% humidity. This change comes from concern over carbon monoxide alarm performance criticisms at low humidity. Secondly, a requirement for long term reliability testing has been in effect since 2003 as part of UL2034. The UL standard requires manufacturers to determine usable life, and more recently notify the consumer of device end of life.

The Center for Disease Control and Prevention, National Center for Environmental Health recommends installing carbon monoxide alarms in homes. The National Fire Protection Association encourages installing carbon monoxide alarms listed by an independent testing laboratory inside your home. The Consumer Product Safety Commission worked closely with Underwriter Laboratories to help develop UL2034. CPSC helps promote carbon monoxide safety awareness.

UL2034 Sec 1-1.2 also defines three specific alarm points by which all residential carbon monoxide alarms must alarm. They are measured in parts per million (ppm) of carbon monoxide (co) over time (in minutes). UL2034 required alarm points: If alarm is exposed to 400 ppm of co-it must alarm between 4 and 15 minutes, if alarm is exposed to 150 ppm of co, it must alarm between 10 and 15 minutes and if alarm is exposed to 70 ppm co, it must alarm between 60 and 240 minutes. UL alarms are also required to have manually operated alarm reset/silence buttons. If elevated levels exist, the alarm will sound again in 6 minutes.

What is important to remember in carbon monoxide alarms is that CO alarms measures exposure to carbon monoxide over time. It alarms if CO levels are extremely high in a short period of time, or if CO levels reach a certain minimum over a long period of time. The carbon monoxide alarm generally sounds before the onset of symptoms in average, healthy adults. This is important because you need to be warned of a potential carbon monoxide problem while you can still react in time. In many reported cases of CO exposure, victims may be aware that they are not feeling well, but become disoriented and can no longer react well enough to exit the building to get help.

The National Electrical Manufacturers Association (NEMA) recommends that state and local legislatures enact laws requiring all dwelling units have a CO alarm or detector. They state that proper use of carbon monoxide detectors can enhance life safety. Newly installed CO equipment should meet the requirements of the most current UL standards including, but not limited to UL2034, and be installed according to the requirements of the National Fire Protection Association (NFPA) Standard 720. SAFE KIDS recommends carbon alarms as part of the steps to keeping homes and family's safe and preventing possible poisoning, by installing at least one carbon monoxide alarm in the house. Alarms should be placed in bedrooms and on the ceiling. Additional alarms on every level provide extra protection.

The CPSC is committed to working to reduce the rate of deaths from carbon monoxide poisoning by twenty percent by the year 2013. It is a most important life safety issue. While we have smoke detector requirements, we provide nothing to detect the presence of carbon monoxide. We have warnings for fire. We smell and see smoke, we see fire. Carbon monoxide provides no clues. Michigan can incorporate carbon monoxide alarms in new residential buildings. In 2005 alone, Massachusetts, Connecticut and Vermont passed laws mandating the use of carbon monoxide alarms in residential dwellings. New York, New Jersey, West Virginia, Rhode Island, Utah and Alaska have requirements for

carbon monoxide alarms. Several states have pending legislation to require carbon monoxide alarms. Many local municipalities have enacted carbon monoxide alarm provisions or have pending legislation.

The cost of the equipment is a small price when lives are at risk. None of us would consider any residence without smoke detectors. Yet, that has not always been the case. It's time that carbon monoxide alarms be part of the safety equipment in every new residential dwelling. What is Michigan waiting for? A cost benefit analysis is immeasurable due to the potential to prevent death and serious injury. It is estimated that the proposed code modification will have a minimal cost impact on a one story dwelling. If two carbon monoxide alarms would be required, at \$80 per unit for a hard wired unit and \$50 per unit installation, the total cost would be \$260. per home.

This code incorporation should be a common sense approach to our future. Carbon monoxide alarms save lives; senseless deaths and injuries can be prevented. The unintended consequences from not requiring carbon monoxide alarms are a frightening and needless prospect.

My name is Sandra O'Niel. Thank you for allowing me to come before you today at your Construction Code meeting. It is an honor to speak to you about the silent killer-carbon monoxide. I am asking you not to wait until it's too late. The statistics from across the country reveal the scope of this problem. Prevention, in the form of installing carbon monoxide alarms in homes, is the easiest, least expensive

And ONLY way to protect residents from the danger. How many deaths and serious injuries will occur in Michigan before our building codes incorporate the installation of carbon monoxide alarms in every new residential home and existing homes when remodeling? You received my proposal in May which outlines the specifics.

Our state building codes set the standards to keep us safe in our homes. More can be done. By requiring alarms to be installed, we can save lives. Carbon monoxide alarms are as important as smoke detectors." Even though smoke alarms are now widely popular, nationally 70% of home fire deaths result from fires in homes with no smoke alarms or non working smoke alarms, " said Andy Neumann, State Fire Marshall. Only 44% of the homes where a fire death occurred in 2003 had smoke alarms present. Over half of those devices did not work, most often because of missing, dead or disconnected batteries.

Carbon monoxide is the #1 cause of poisoning in North America: Because you can't taste, smell or see it, it can kill you before you know it's there. A number of states are taking action to prevent carbon monoxide injury and death by passing laws to require the installation of carbon monoxide alarms. Carbon monoxide alarms are the only safe way to detect the presence of carbon monoxide. By installing these important devices, needless injury and death caused by carbon monoxide poisoning can be prevented. Are you committee members willing to risk saying NO to incorporating carbon monoxide alarms into the 2006 construction code?

On Friday, June 2, Minnesota Governor Tom Pawlenty signed into law, a bill requiring carbon monoxide detectors. Eight other states have passed similar laws in recent years. Although widely recommended, detectors had not been legally required in Minnesota. "It's just common sense", said David Griggs of Cannon Falls, whose granddaughter's death 2 years ago from carbon monoxide poisoning inspired him to push for the law. Improper ventilation of his son and daughter in law's furnace combined with a down draft resulted in a carbon monoxide build-up. Another supporter of the bill, Marty Scheerer, Edina Fire Chief and member of the legislative committee for the Fire Chiefs Association stated "It saves lives" referring to the detection equipment.

State Representative Denny McNamara sponsored the bill in the house; His brother-in-law died of carbon monoxide poisoning in a Northern Minnesota cabin 6 years ago. McNamara said the requirement was approved in part because carbon monoxide alarms have become more reliable and less costly.

I spent 5 hours last Saturday at a local fire station passing out carbon monoxide and smoke alarms. Many people told me they were unprotected by either safety unit and yet, they said they knew they should have them. Some of the folks told me they didn't have

any appliances that could generate carbon monoxide-when I asked a few questions; they were amazed to learn the facts.

While at the Fire Prevention event, I spent time with a local builder; he wholeheartedly supports the efforts of the code revision. He is now part of a foundation promoting carbon monoxide awareness and education created by the 4 children of parents who died in a home he built 3 years ago without a carbon monoxide alarm. Not only 2 lives were lost, but think for a moment of the impact on the many people who knew and loved the couple.

I spoke to another well respected builder in northern Michigan who told me last month that carbon monoxide alarms aren't necessary in new homes. He said carbon monoxide probably happens in older homes where the equipment is faulty. Remember, most new homes are built very air tight, thus cutting down on the supply of fresh air to the furnace, creating an oxygen starved flow. Tightly closing windows and doors as well as additional insulation can cause similar problems in older homes.

Change is not always easy, even when it is one's best interest. Change, when it is mandated is even more difficult. Change, when it impacts a large a number of people, is also a delicate issue. I did not think this process would be easy, but this issue is critical to the welfare of the citizens of Michigan. I have no political motivation; my hope is that family's futures are not critically altered as a result of a danger no one could see, hear or feel. We have the power to prevent carbon monoxide poisonings. We need to change the code requirements. The change to the code has a dual purpose: first, it requires newly constructed or significantly remodeled homes at risk of potential carbon monoxide poisoning to have carbon monoxide alarms installed. Secondly, it sets a standard of reliability for the alarms to provide for the greatest protection.

Currently, carbon monoxide alarms CAN detect unacceptable levels of carbon monoxide in the air, provide early warning before a healthy adult might show symptoms of acute high-level carbon monoxide poisoning, act as a round the clock monitoring of carbon monoxide in a living space, can sense carbon monoxide that reaches it and like any other electrical device, is subject to breakdown. Carbon monoxide alarms are not a substitute for proper maintenance of home appliances, but an excellent means of protection.

Carbon monoxide alarms are intended to alarm at levels below those that cause a loss of ability to react to the danger of carbon monoxide exposure. *Many cases of reported carbon monoxide poisoning indicate that while the victims are aware that they are not well, they became so disoriented that they were unable to save themselves by either exiting the building or calling for assistance.

Questions relating to testing and reliability of carbon monoxide alarms have provided resistance in the past to incorporating carbon monoxide alarms into code standards. UL 2034 the Standard for Carbon Monoxide Alarms has been one of UL's more active Standards. Initial work began in 1989. UL2034 was originally published in 1992. The standard was revised in 1995 to address concerns regarding stability of the CO alarms. In

1998 the Standard was revised to address comments from the gas industry related to performance and stability of CO alarms.

Changes to UL 2034 with an effective date of October 1, 1998 required CO alarms to exhibit their ability to ignore 30 ppm CO for 30 days and 70 ppm for one hour. A new sequence test was added to exhibit the ability of a CO alarm to resist multiple exposures of CO without an appreciable change in the alarm's response. Finally, marking and user instructions direct the user of the product when indicating an alarm to 1. Operate its silence button 2. Call their emergency service organization and 3. Move to a location which has fresh air. Repeated activation of the alarm in a 24-hour period requires the same basic three steps plus contracting a qualified technician to trouble shoot the problem.

Additional revisions were made in 2001:

Increased the number of gases in the Selectivity Test, Section 39.

Revised the requirements in the Effect of Shipping and Storage Test, Section 45.2

Added a new Section 74A to address reliability requirements,

Added Appendix D (Sample size Determination for Time-of-Manufacture Reliability Testing) for reference only.

UL has completed a survey program to monitor the aging of CO alarms. In March 1999 UL purchased 70 alarms from retail establishments. Initial sensitivity tests were performed and samples distributed to members of the staff to be installed in their homes. Periodically these devices were returned to UL to repeat sensitivity tests. Tests were performed 12 times over a four year period, and the results were very encouraging. A vast majority of the units performed exactly as required by UL2034. A few responded a little too early, and a few a little late. But all of the devices provided signals that would allow a homeowner to respond to elevated level of CO in the appropriate manor. Two separate devices reported significant CO events, and three other samples indicated supervised trouble signals and were examined by their manufacturers.

To reiterate from the proposal, reliability and performance concerns relating to carbon monoxide alarms have been primarily based on a study "Evaluating the Performance of Residential CO Alarms" published by Mosaic Industries and GRI in 2003 and certain testimony titled "CO Alarm Mandates in Model Codes as Public Policy" by Ted Williams. While the GRI report was published in 2003, the CO alarms tested were manufactured prior to 2000. As with most technologies the CO sensing technology and performance has evolved.

In response to the issue raised regarding the evolution of the UL2034 standard, the opposition is forgetting that most all UL standards have been revised. In fact, it is the objective of the standards technical panel to continually review these standards in light of

new technology and performance concerns. An appropriate example of these efforts can be seen through UL217 (smoke alarm standard.)

Specific modifications to UL2034 that have been ratified include:

A test requirement to ensure operation at 10% relative humidity. The motivation for this change stems from GTI (formally GRI) reports and Mosaic criticism of CO alarm performance at low humidity. Industry (not GTI or Mosaic) addressed the concern by following the procedure to amend the standards.

A requirement for long term reliability test has been in effect since 2004 as part of UL2034. The UL standard requires manufacturers to determine usable life, and more recently notify the consumer of device end of life. A reliability-sampling plan that is based on the usable life is present specifically to address the reliability concerns. This sampling plan has been implemented per the requirements of GTI/Mosaic (reference GRI report GRI-96/0055).

UL checked 5 year random home samples of CO detectors and found that they performed effectively under UL Standard 2034.

Design, specification, operation and installation standards are tested, published and updated by UL2034 and the National Fire Protection Association NFPA720.

It is time for carbon monoxide alarms to be incorporated into the 2006 code in Michigan. The Consumer Product Safety Commission, The National Fire Protection Association and the National Electrical Manufacturing Association all endorse carbon monoxide code laws. These organizations all publish performance of reliability. I found noteworthy, a carbon monoxide white paper I recently read from the Department of the Navy, Naval Facilities Engineering Command Guide Specification from May 24, 1999. Part of the white paper is to alert the designers and construction inspectors and occupants of the hazards, causes and precautions necessary to avoid further injury and loss of life due to carbon monoxide poisoning. The second part refers to the installation of carbon monoxide detectors in accordance with the manufacturer's instructions.

Another argument, holding back the advancement of safety, relates to the added costs of equipment. Costs of adding co detectors to a hardwired smoke detector system is typically \$30-\$80 per home. In homes requiring additional units, the wholesale costs of the units to builders is significantly less than retail. With the availability of combination units on the market today, a builder/electrician can install one unit (smoke/carbon monoxide), cut labor costs and give the homeowner the protection of both a smoke and CO alarm. Societal costs attributable to carbon monoxide poisoning however, exceeds \$630 million annually according to the Consumer Product Safety Commission.

The time has come. There are no good and sufficient reasons disallowing the inclusion of carbon monoxide alarms into the 2006 construction code. And for now, I urge each of you to go out and buy at least one carbon monoxide alarm and install it in accordance with the manufacturers instructions.

MORE LETTERS TO THE EDITOR

Living areas need both CO, smoke alarms

To the Record Patriot:

Recent events have shown how quickly a life can be taken in fire situations. Death from smoke inhalation usually translates to mean lethal carbon monoxide (CO) poisoning.

It is the most poisonous component of smoke, even when hydrogen cyanide, acrolein, aldehydes, heat, particulates, etc. are present. The best defense for this kind of assault are smoke and CO alarms (detectors).

I recommend at least two CO alarms be present in each living space, if the living space is not

excessively large and is all on one level.

Another CO alarm should be added for each additional level. CO alarms should be mounted on walls at chest or head level (where we breathe), not on the floor and not on the ceiling, like smoke alarms.

Both smoke and CO alarms should be main power (AC) electrified, with battery back-up. CO alarms are good for only about five years, so new units should be swapped in every few years, and batteries changed even more frequently.

For information about CO, www.coheadquarters.com, www.carbonmonoxidekills.com

For information about CO, www.coheadquarters.com, www.carbonmonoxidekills.com. You might also like to review my new book, Carbon Monoxide Poisoning, due to be released in October (see Amazon.com).

For more information about a Michigan effort to make CO alarms mandatory in buildings, contact Sandy Oniel, at gardenia3@nextel.blackberry.net.

groups attempting to get legislation passed that would make such requirements law. I endorse these actions. No one should die needlessly from fire and/or CO poisoning when preventive measures are at hand. CO is a serious matter, of life and death.

I have worked for years with EPA, WHO and other organizations on CO matters. It is my opinion that every house, apartment, motel/hotel, etc. should be equipped with smoke and CO alarms.

There are local and national

David G. Penney, Ph.D.
retired professor,
Wayne State University
Platte Lake and Beulah